



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

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August 9, 1985

Mr. Leroy Fyock
Chevron Resources Company
Manila Star Route
Vernal, Utah 84078

Dear Mr. Fyock:

Re: Enlargement of Tailings Dam, Vernal Phosphate Mine,
ACT/047/007, Uintah County, Utah

The Division has reviewed maps and plans submitted on May 21, and June 3, 1985, regarding the expansion of the tailings dam at the Vernal Phosphate Mine.

The information submitted has been found to be insufficient to allow the Division to give approval to this proposed modification to the existing permit. Attached are the Division's review comments.

Please respond to these comments by September 13, 1985 if possible, so that the action can be taken before the Board of Oil, Gas and Mining in October. Feel free to contact me if I can provide assistance.

Sincerely,

Susan C. Linner
Reclamation Biologist/
Permit Supervisor

jvb

cc: L. Braxton
D. Cline
D. Darby
R. Harden
L. Kunzler
J. Leatherwood
R. Summers

0028R-41

Chevron Resources
Vernal Phosphate Mine
Enlargement of Tailings Dam
ACT/047/007
Uintah County, Utah

August 9, 1985

RULE M-3 -DD

Will the increase in dam elevation place the surface area of the reservoir outside the mine permit area?

The applicant must supply geotechnical analysis of the proposed dam modification to the Division for public and technical review.

The applicant should submit a geologic map of the tailings pond area and include cross sections that illustrate the stratigraphy below the tailings pond.

The applicant shall submit a letter of approval by the State Engineer, for construction of the new dam.

RULE M-3(1)(a) - LK

The applicant must identify the total acreage involved with the proposed expansion.

RULE M-3(1)(a) - DD

The applicant shall state the total surface area of the storage area behind the dam.

RULE M-3(1)(e) - DD

The applicant shall show through calculations that the proposed new tailings pond will contain the expected runoff from the contributing watershed for a 100 year-24 hour precipitation event and the expected total sediment load in excess of the amount of tailings that are expected to be stored in the pond.

RULE M-3(1)(g) - JSL

The location area for topsoil and waste stockpiles must be delineated.

RULE M-3(1)(g) - DD

The applicant shall show the total drainage area of the watershed and calculate the acreage.

RULE M-3(1)(h) - DD

The applicant shall describe the expected groundwater flow patterns that will be caused by the enlarged tailings pond and the effects it will have on the surrounding area. Will leaching of the tailings introduce toxic materials into the groundwater system?

RULE M-3(1)(h) - DC

Shallow monitoring well data (Table 10 in the approved MRP) indicates the presence of a shallow aquifer in the mine area. Please submit a map of the water table or piezometric surface contours in the mine permit and adjacent area. Please submit any well test data that has been performed on the wells. Information provided from the above should be provided to determine the depth to water, rate and direction of flow.

Please submit a complete set of water quality analyses from all ground and surface water monitoring sites from 1982 until August of 1985 (see attachment).

RULE M-3(2) - LK

The applicant must provide a reclamation plan for the proposed expansion including appropriate revegetation success standards (RULE M-10(12)). This may be tied into existing plans for the mine.

RULE M-3(2)(b) - DD

The applicant shall state the post mining land use of the tailings pond area.

RULE M-5 - JRH

Modifications to the mining plan must also include cost estimate for reclamation of the additional area. Upon final review and approval of the requested modifications, the Division shall determine the additional surety necessary based upon the cost estimate provided by Chevron.

RULE M-10(3) and RULE M-10(13) - DD

The applicant shall provide reclamation plans for the tailings pond.

Rule M-10(3) - JRH

The tailings dam structure must comply with state and federal regulations pertaining to tailings dams and water impounding structures. Dupocate information pertaining to the requirements of these other agencies shall be provided to the Division. Copies of letters of appoval concerning the tailings embankment shall be provided by Cheveron to the Division prior to final approval of the requested modification.

RULE M-10(14) - JSL

The topography, survey data and embankment layout map indicates four possible borrow areas. A soil survey on an Order 1 scale must be developed to use as an isopach map on the borrow areas. A physical and chemical analysis of the borrow area soils should also be submitted. Will the soil removed be contemporaneously used or stockpiled? If stockpiled, please submit plans to protect the stockpile from wind and water erosion, compaction and contamination. Will the soil from the borrow areas also be used for reclamation purposes?

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ATTACHMENT

Chevron Resources Inc. Vernal Phosphate Operations Water Quality Data (from MRP amended 1983)

Number	Sample Site	DATE				
1	BC1	5/82	8/82	11/82	3/83	5/83
2	BC2	5/82	8/82	11/82	3/83	5/83
3	BC3	5/82	8/82	11/82	3/83	*
4	BC4	4/82	8/82	11/82	3/83	*
5	BC5	4/82	8/82	11/82	3/83	*
6	TPIXS	5/82	*	*	*	*
7	TPIXA	*	8/82	*	*	*
8	TPA	*	3/82	11/82	3/83	*
9	TPEX	*	8/82	11/82	*	*
10	TP2XS	5/82	*	*	3/83	*
11	CCIX	5/82	8/82	11/82	3/83	*
12	SS	5/82	8/82	11/82	3/83	*
13	SME-2	*	8/82	*	*	*
14	MW-1	*	*	11/82	*	6/83
15	MW-2	*	8/82	*	*	*
16	MW-3	*	8/82	*	*	*
17	MW-4	*	*	*	*	5/83
18	MW-5	*	*	*	*	5/83
19	MW-6	*	*	*	*	6/83
20	HC-0X	*	*	*	*	5/83
21	HC-1X	*	*	*	*	5/83
22	WW-D	*	*	*	3/83	*
23	GS	*	8/82	*	*	*

* Denotes no sample analysis

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